

IN THE CLAIMS

Kindly replace the prior claims listing by the following listing:

1-30. (cancelled)

31. (currently amended): A metal complex compound of formula (1a)



wherein Me is manganese which is present in oxidation state II, III, IV or V, or iron which is present in oxidation state II, III or IV,

X is a coordinating or bridging radical,

n and m are each independently of the other an integer having a value of from 1 to 8,

p is an integer having a value from 0 to 32,

z is the charge of the metal complex,

Y is a counter-ion,

q = z/(charge Y), and

ligand L is a compound of formula (3)



wherein

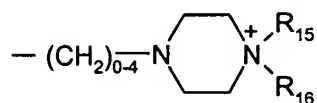
R'₆ is cyano; halogen; nitro; -COOR₁₂ or -SO₃R₁₂; -SR₁₃, -SO₂R₁₃ or -OR₁₃; -NR₁₄R₁₅; -N(R₁₃)-(CH₂)₁₋₆NR₁₄R₁₅; -N(R₁₃)-(CH₂)₁₋₆-N[⊕]R₁₄R₁₅R₁₆;

-N(R₁₃)-N-R₁₄R₁₅ or -N(R₁₃)-N[⊕]R₁₄R₁₅R₁₆, wherein

R₁₂ is in each case hydrogen, a cation, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted by C₁-C₄alkyl, C₁-C₄alkoxy, halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di-C₁-C₄alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, where the amino groups may be quaternized, phenyl, phenoxy or by naphthoxy;

R₁₃ is in each case hydrogen, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above;

and R₁₄, R₁₅ and R₁₆ are each independently of the other(s) hydrogen, unsubstituted or hydroxyl-substituted C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above, or R₁₄ and R₁₅ together with the nitrogen atom bonding them form a pyrrolidine, piperidine, morpholine or azepane ring which is unsubstituted or substituted by at least one unsubstituted C₁-C₄alkyl and/or substituted C₁-C₄alkyl, ~~wherein the nitrogen atom can be quaternized;~~
or a radical

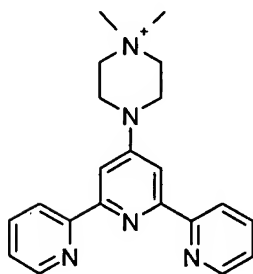


wherein R₁₅ and R₁₆ are as defined above and the ring may be substituted; and

R'₃ and R'₉ are as defined above for R'₆ or are hydrogen, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above,

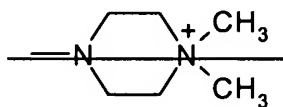
with the proviso that

- (i) at least one of the substituents R'₃, R'₆ and R'₉ contains a quaternized nitrogen atom which is not directly bonded to one of the three pyridine rings A, B or C and that
- (ii) with the proviso that when the ligand L is 1,1-dimethyl-4-[2,2';6',2'']terpyridin-4'-yl-piperazin-1-ium



the metal Me is not Mn and the counter-ion Y is not Cl⁻ or I⁻

~~Y is neither I⁻ nor Cl⁻ in the case that Me is Mn, R'₃ and R'₉ are hydrogen and R'₆ is~~



32-42. (cancelled).

43. (previously presented): A washing, cleaning, disinfecting or bleaching agent, comprising

- I) 0 - 50 % A) of an anionic surfactant and/or B) of a non-ionic surfactant,
- II) 0 - 70 % C) of a builder substance,
- III) 1 - 99 % D) of a peroxide, and
- IV) E) a metal complex compound of formula (1a) as described in claim 46 in an amount which, in the liquor, gives a concentration of 0.5 – 50 mg/litre of liquor when from 0.5 to 20 g/litre of the washing, cleaning, disinfecting and bleaching agent are added to the liquor,

the percentages in each case being percentages by weight, based on the total weight of the agent.

44-45 (cancelled).

46. (currently amended): A method of catalyzing an oxidation reaction which comprises oxidizing a substrate in the presence of a catalytically effective amount of a metal complex compound of formula (1a)



wherein Me is manganese which is present in oxidation state II, III, IV or V, or, iron which is present in oxidation state II, III or IV,

X is a coordinating or bridging radical,

n and m are each independently of the other an integer having a value of from 1 to 8,

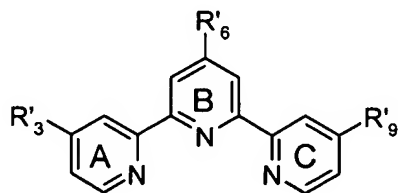
p is an integer having a value of from 0 to 32,

z is the charge of the metal complex,

Y is a counter-ion,

q = z/(charge Y), and

ligand L is a compound of formula (3)



wherein

R'₆ is cyano; halogen; nitro; -COOR₁₂ or -SO₃R₁₂; -SR₁₃, -SO₂R₁₃ or -OR₁₃; -NR₁₄R₁₅; -N(R₁₃)-(CH₂)₁₋₆NR₁₄R₁₅; -N(R₁₃)-(CH₂)₁₋₆-N[⊕]R₁₄R₁₅R₁₆;

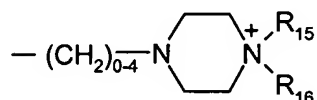
-N(R₁₃)-N-R₁₄R₁₅ or -N(R₁₃)-N[⊕]R₁₄R₁₅R₁₆, wherein

R₁₂ is in each case hydrogen, a cation, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted by C₁-C₄alkyl, C₁-C₄alkoxy, halogen, cyano, nitro, carboxyl, sulfo, hydroxyl, amino, N-mono- or N,N-di-C₁-C₄alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, N-phenylamino, N-naphthylamino, where the amino groups may be quaternized, phenyl, phenoxy or by naphthoxy;

R₁₃ is in each case hydrogen, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above;

and R₁₄, R₁₅ and R₁₆ are each independently of the other(s) hydrogen, unsubstituted or hydroxyl-substituted C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above, or R₁₄ and R₁₅ together with the nitrogen atom bonding them form a pyrrolidine, piperidine, morpholine or azepane ring which is unsubstituted or substituted by at least one unsubstituted C₁-C₄alkyl and/or substituted C₁-C₄alkyl, ~~wherein the nitrogen atom can be quaternized;~~

or a radical

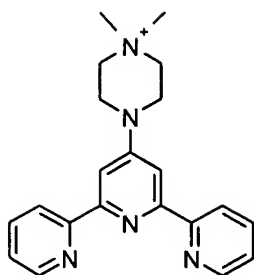


wherein R₁₅ and R₁₆ are as defined above and the ring may be substituted; and

R'₃ and R'₉ are as defined above for R'₆ or are hydrogen, C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above,

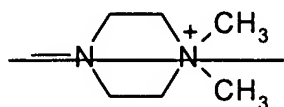
with the proviso that

- (i) at least one of the substituents R'₃, R'₆ and R'₉ contains a quaternized nitrogen atom which is not directly bonded to one of the three pyridine rings A, B or C and that
- (ii) with the proviso that when the ligand L is 1,1-dimethyl-4-[2,2';6',2'']terpyridin-4'-yl-piperazin-1-ium



the metal Me is not Mn and the counter-ion Y is not Cl⁻ or I⁻

Y is neither I⁻ nor Cl⁻ in the case that Me is Mn(II), R₃' and R₆' are hydrogen and R₆' is



47-48. (cancelled).

49. (previously presented): A method according to claim 46, wherein X is CH₃CN, H₂O, F⁻, Cl⁻, Br⁻, HOO⁻, O₂²⁻, O²⁻, R₁₇COO⁻, R₁₇O⁻, LMeO⁻ or LMeOO⁻ wherein R₁₇ is hydrogen, -SO₃C₁-C₄alkyl, or unsubstituted or substituted C₁-C₁₈alkyl or aryl, and L and Me are as defined in claim 46.

50. (previously presented): A method according to claim 46, wherein Y is R₁₇COO⁻, ClO₄⁻, BF₄⁻, PF₆⁻, R₁₇SO₃⁻, R₁₇SO₄⁻, SO₄²⁻, NO₃⁻, F⁻, Cl⁻, Br⁻, I⁻, citrate, tartrate or oxalate, wherein R₁₇ is hydrogen or unsubstituted or substituted C₁-C₁₈alkyl or aryl.

51. (previously presented): A method according to claim 46, wherein n is an integer having a value of from 1 to 4.

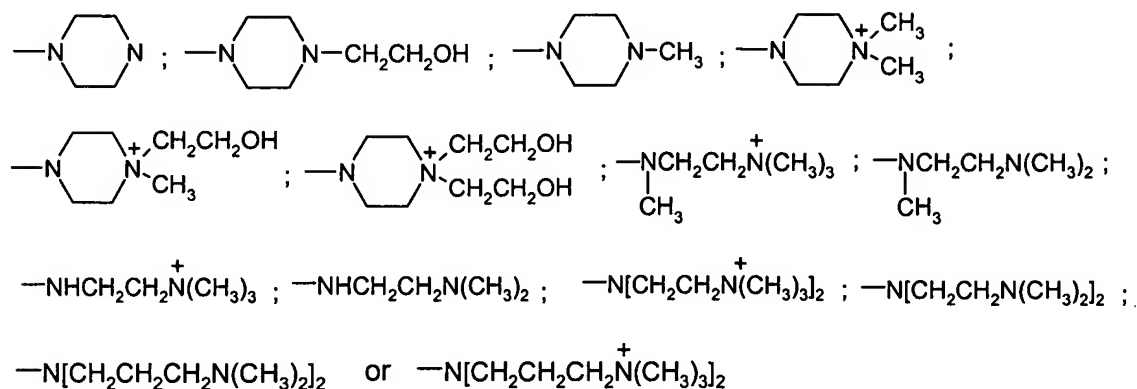
52. (previously presented): A method according to claim 46, wherein m is an integer having a value of 1 or 2.

53. (previously presented): A method according to claim 46, wherein p is an integer having a value of from 0 to 4.

54. (previously presented): A method according to claim 46, wherein z is an integer having a value of from 8- to 8+.

55-57. (cancelled).

58. (previously presented): A method according to claim 46, wherein R₆' is



and

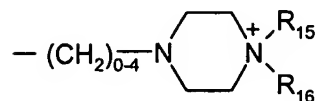
R₃' and R₉' are as defined above for R₆' or are hydrogen.

59. (cancelled).

60. (previously presented): A method according to claim 46, wherein

R₃, R₆ and R₉ are each independently of the others phenyl unsubstituted or substituted by C₁-C₄alkyl, C₁-C₄alkoxy, halogen, phenyl or hydroxyl; cyano; nitro; -COOR₁₂ or -SO₃R₁₂, wherein R₁₂ is in each case hydrogen, a cation, C₁-C₄alkyl or phenyl; -SR₁₃, -SO₂R₁₃ or -OR₁₃ wherein R₁₃ is in each case hydrogen, C₁-C₄alkyl or phenyl, -N(CH₃)-NH₂ or -NH-NH₂; amino; N-mono- or N,N-di-C₁-C₄alkylamino unsubstituted or substituted by hydroxy in the alkyl moiety, wherein the nitrogen atoms which are not bonded to one of the three pyridine rings A, B or C, may be quaternized; N-mono- or N,N-di-C₁-C₄alkyl-N[⊕]R₁₄R₁₅R₁₆, unsubstituted or substituted by hydroxy in the alkyl moiety, wherein R₁₄, R₁₅ and R₁₆ are each independently of the others hydrogen, unsubstituted or hydroxyl-substituted C₁-C₁₂alkyl, or phenyl unsubstituted or substituted as indicated above, or R₁₄ and R₁₅ together with the nitrogen atom bonding them form a pyrrolidine, piperidine, morpholine or azepane ring unsubstituted or substituted by at least one C₁-C₄alkyl or by at least one unsubstituted C₁-C₄alkyl and/or substituted C₁-C₄alkyl wherein the nitrogen atom can be quaternized; N-mono- or N,N-di-C₁-C₄alkyl-NR₁₄R₁₅ unsubstituted or substituted by

hydroxy in the alkyl moiety, wherein R_{14} and R_{15} can have the meanings indicated above; or a radical



wherein R_{15} and R_{16} have the meanings indicated above, and the ring may be substituted, where R'_3 and R'_9 can likewise be hydrogen.

61. (previously presented): A method according to claim 46, wherein R'_6 is hydroxy.

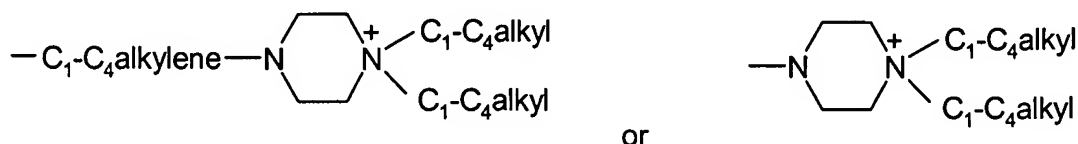
62. (cancelled).

63. (previously presented): A method according to claim 46, wherein at least one of the substituents R'_3 , R'_6 and R'_9 is one of the radicals $-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N[(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}]_2$; or $-N(R_{13})-N^{\oplus}R_{14}R_{15}R_{16}$, wherein R_{13} is in each case hydrogen, C_1-C_4 alkyl or phenyl and R_{14} , R_{15} and R_{16} are each independently of the others hydrogen or substituted or unsubstituted C_1-C_{18} alkyl or aryl, or R_{14} and R_{15} together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms; or $-NR_{14}R_{15}$; $-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-NR_{14}R_{15}$; $-N[(C_1-C_6\text{alkylene})-NR_{14}R_{15}]_2$; or $-N(R_{13})-N-R_{14}R_{15}$, wherein R_{13} and R_{16} are as defined above and R_{14} and R_{15} together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which is unsubstituted or substituted by at least one unsubstituted C_1-C_4 alkyl and/or substituted C_1-C_4 alkyl and may contain further heteroatoms, wherein at least one nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.

64. (previously presented): A method according to claim 46, wherein at least one of the substituents R'_3 , R'_6 and R'_9 is one of the radicals $-(C_1-C_4\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N(R_{13})-(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}$; $-N[(C_1-C_6\text{alkylene})-N^{\oplus}R_{14}R_{15}R_{16}]_2$; or $-N(R_{13})-N^{\oplus}R_{14}R_{15}R_{16}$, wherein R_{13} is as defined in claim 46 and R_{14} , R_{15} and R_{16} are each independently of the others hydrogen or substituted or unsubstituted C_1-C_{12} alkyl or aryl, or R_{14} and R_{15} together with the nitrogen atom bonding them form a 5-, 6- or 7-membered ring which may be unsubstituted or substituted by at least one

unsubstituted C₁-C₄alkyl and/or substituted C₁-C₄alkyl and may contain further heteroatoms; or -NR₁₄R₁₅; -(C₁-C₆alkylene)-NR₁₄R₁₅; -N(R₁₃)-(C₁-C₆alkylene)-NR₁₄R₁₅; -N[(C₁-C₆alkylene)-NR₁₄R₁₅]₂; or -N(R₁₃)-N-R₁₄R₁₅, wherein R₁₃ and R₁₆ are as defined above and R₁₄ and R₁₅ together with the nitrogen atom bonding them form a substituted or unsubstituted 5-, 6- or 7-membered ring which may contain further heteroatoms, wherein the nitrogen atom which is not bonded to one of the pyridine rings A, B or C is quaternized.

65. (previously presented): A method according to claim 64, wherein at least one of the substituents R'₃, R'₆ and R'₉ is one of the radicals



wherein the alkylene group is unbranched or branched and may be substituted, and wherein the alkyl groups are independently unbranched or branched and may be substituted and wherein the piperazine ring may be substituted.

66. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1a) is used in a washing, cleaning, disinfecting or bleaching agent.
67. (previously presented): A method according to claim 66, wherein a metal complex compound of formula (1a) is formed *in situ* in the washing, cleaning, disinfecting or bleaching agent.
68. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1a) is used together with a peroxy compound for the bleaching of spots or stains on textile material or for the prevention of the redeposition of migrating dyes in the context of a washing process or for the cleaning of hard surfaces.
69. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1a) is used as a catalyst for reactions with a peroxy compound for bleaching in the context of paper-making.
70. (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1a) is used as a catalyst for wastewater treatment.

- 71 (previously presented): A method according to claim 46, wherein a metal complex compound of formula (1a) is used as a catalyst for the delignification of cellulose.
72. (previously presented): A method according to claim 46, wherein mixtures of manganese complexes of the formula (1a) with iron complexes of the formula (1a) are used for preventing the redeposition of migrating dyes and at the same time bleaching of spots or stains on textile material.
73. (previously presented): A method according to claim 46, wherein mixtures of manganese complexes of the formula (1a) with iron complexes of the formula (1'), which corresponds to the formula (1a) but contains no quaternized nitrogen atoms, are used.